

355 South Lemon Ave, Suite A Walnut, CA 91789 (909) 595-5314 Phone (909) 595-5394 Fax

March 31, 2022 Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, DC 20426

Re:

Premium Energy Holdings' Application for Preliminary Permit for the Whale Rock Pumped Storage Hydro Project, FERC Project No.

Dear Secretary Bose:

Pursuant to 18 C.F.R. §§ 4.32 and 4.81 of the Federal Energy Regulatory Commission's ("FERC") regulations, enclosed for filing is Premium Energy Holdings, LLC's ("Premium Energy") Application for Preliminary Permit for the Whale Rock Pumped Storage Hydro Project.

As detailed in the application, Premium Energy proposes to evaluate the potential development of a pumped storage hydro power plant in the southern area of the Whale Rock Reservoir in southern California. Premium Energy has a keen interest in harnessing and increasing renewable energy production in California primarily firming and shaping offshore wind generation, developing long-duration energy storage projects as the Whale Rock PSP.

The submittal of this application is for the purpose of securing priority during the licensing process. Feasibility studies will be carried out during the term of this preliminary permit to support the license application.

Premium Energy looks forward to working with the Commission while developing this important new source of clean and sustainable long-duration and large-scale energy storage, geared up to support the development of California's 20GW of offshore wind generation.

Document Accession #: 20220331-5534 Filed Date: 03/31/2022

If you have any questions or require additional information regarding this submittal, please contact me at (909) 595-5314 or email me at victor.rojas@pehllc.net.

Sincerely,

Victor M. Rojas

Managing Director at Premium Energy Holdings, LLC

Enclosures

cc:

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT FOR THE WHALE ROCK PUMPED STORAGE HYDRO PROJECT

FERC	Pro	ect	No.	
FERC	Proj	ect	No.	

Prepared by

Premium Energy Holdings, LLC

March 31, 2022

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INITIAL STATEMENT

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

Application for Preliminary Permit

for the Whale Rock Pumped Storage Hydro Project

Premium Energy Holdings, LLC ("Premium Energy" or "PEH"), a California based limited liability corporation, applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed Whale Rock Pumped Storage Hydro Project, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

1. The location of the proposed project is:

State or territory: California

Counties: San Luis Obispo County

Township or nearby town: Cayucos

Streams or other body of water: Whale Rock Reservoir

2. The exact name, business address, and telephone number of the applicant are:

Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789

Telephone: (909) 595-5314

3. The exact name and business address of each person authorized to act as agent for the applicant in this application are:

Victor M. Rojas

Managing Director at Premium Energy Holdings, LLC

355 South Lemon Ave, Suite A

Walnut, CA 91789

Telephone: (909) 595-5314 Email: victor.rojas@pehllc.net

Maria Flores

Project Manager at Premium Energy Holdings, LLC

355 South Lemon Ave, Suite A

Walnut, CA 91789

Telephone: (909) 595-5314 Email: maria.flores@pehllc.net

4. Preference under Section 7(a) of the Federal Power Act

Premium Energy is a corporation operating in California and is not claiming preference under section 7(a) of the Federal Power Act. Premium Energy's business primarily involves the retrofit and modernization of power plants and pumping plants, transmission planning and design, power system studies, testing and commissioning of power plants and substations.

5. Term of Permit:

The proposed term of the requested permit is forty-eight (48) months.

6. Existing Dams or Other Project Facilities:

The proposed project would use Whale Rock reservoir and its dam as lower reservoir. The project also proposes the construction of a new upper reservoir with its respective dam.

ADDITIONAL INFORMATION REQUIRED BY 18 C.F.R. § 4.32(a)

Identification of persons, associations, domestic corporations, municipalities, or 1. state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

> Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789

Telephone: (909) 595-5314

- Identify (names and mailing addresses): 2.
 - i. Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located.

San Luis Obispo County. County Government Center 1055 Monterrey Street San Luis Obispo, CA 93408 Telephone: (805) 781-5000

- ii. Every city, town or similar local political subdivision:
 - (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

None.

That has a population of 5,000 or more people and is located within 15 miles of the project dam:

San Luis Obispo County. County Government Center 1055 Monterrey Street San Luis Obispo, CA 93408 Telephone: (805) 781-5000

City Of Atascadero, Administrative Office 6500 Palma Ave Atascadero, CA 93422 Telephone: (805) 461-5000

Templeton Community Services District - Administration 420 Crocker St. Templeton, CA 93465

The City of Morro Bay 595 Harbor Street Morro Bay, CA 93442

- iii. Every irrigation district, drainage district, or similar special purpose political subdivision:
 - (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

None.

(B) That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project:

Cayucos Area Water Organization (CAWO) 1055 Monterrey Street San Luis Obispo, CA 93408 Telephone: (805) 781-5000

Morro Rock Mutual Water Co 425 S Ocean Ave Cayucos, CA 93430 Telephone: (805) 995-3766

Cayucos Beach Mutual Water Association 425 south ocean avenue Cayucos, CA 93430

Telephone: (805) 995-3766

Every other political subdivision in the general area of the project that iv. there is reason to believe would likely be interested in, or affected by, the application; and interest:

> San Luis Obispo County Flood Control And Water Conservation District 976 Osos St San Luis Obispo, CA 93401 Telephone: (805) 781-5011

California Men's Colony (CMC) Colony Dr, San Luis Obispo, CA 93409 Telephone: (805) 547-7900

California Polytechnic State University 1 Grand Avenue San Luis Obispo, CA 93407 Telephone: (805) 756-1111

All Indian tribes that may be affected by the project: v.

> Chairperson Tule River Indian Tribe of the Tule River Reservation P.O. Box 589 Porterville, CA 93258-0589 Telephone: (559) 781-4271

VERIFICATION STATEMENT

This application for a preliminary permit for the proposed Whale Rock Pumped Storage Hydro project is executed in the state of California, county of Los Angeles.

By: Victor M. Rojas Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A

Walnut, CA 91789

Being duly sworn, deposes, and says that the contents of this application for a preliminary permit are true to the best of his knowledge or belief. The undersigned applicant has signed the application this 31th day of March of 2022.

Victor Rojas

Managing Director at Premium Energy Holdings, LLC

Subscribed and sworn before me, a Notary Public of the State of California, County of Los Angeles, this day of March 31, 2022.

NOTARY PUBLIC

EXHIBIT 1 – DESCRIPTION OF THE PROPOSED PROJECT

1. GENERAL CONFIGURATION.

The proposed Whale Rock Pumped Storage Hydro project ("Whale Rock PSH" or "Project") would be located 0.5 mile east of Cayucos, San Luis Obispo County. The project concept envisions the construction of a pumped storage power facility with a minimum capacity of about 600 MW to a maximum of about 1500MW, and a minimum storage duration of 8 hours to a maximum of about 48 hours duration.

The Whale Rock PSH would add storage resources to the state's clean energy portfolio and would help in the goal of reducing carbon footprint, improving the grid's reliability and flexibility, and meeting customer's needs.

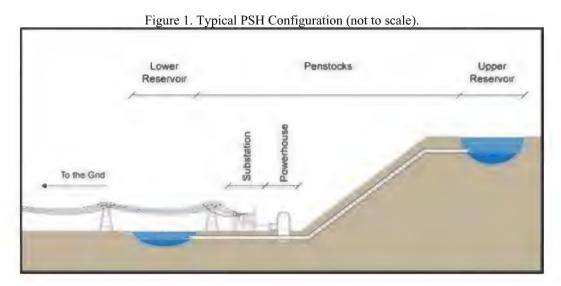
The project proposes the use of Whale Rock Reservoir as a lower reservoir, and the construction of a new upper reservoir (Graves Reservoir) seven miles northeast from Cayucos, San Luis Obispo County. This alternative would require the following construction activities:

- Earthworks and grading to obtain the proposed reservoir floor.
- Construction of the proposed Dam.
- Realignment of a section of an existing road.

Graves Reservoir would be located in private owned land. The penstocks would pass through land owned by several private owners. The Project's powerhouse and substation would be located on land owned by the State of California.

Whale Rock PSH would require the construction of a new embankment for its operation. The new upper reservoir "Graves Reservoir" would be at an elevation of 1,788 ft. Additional information are depicted in Exhibit 3, Map 1.

The proposed project would operate as a closed loop hydro-power pumped storage plant (Figure 1). Once the proposed upper reservoir is filled with enough stored water for project operation, water will not be taken from Whale Rock Reservoir, except for small amounts to make up for losses due to evaporation. Percolation losses will be controlled using geomembranes covering the bottom of the upper reservoir.



The project's proposed upper reservoir would require the construction of new embankment for it to be filled. The embankment for the project's proposed reservoir would consist of compacted earth dams. Conceptual dimensions for the project's dam and penstocks for each alternative are detailed in Table 1 and Table 2, respectively.

Table 1. New Reservoirs' Embankment Dimensions

Description	Proposed Reservoir	Dam Crest Elev. [ft]	Dam Height [ft]	Dam Length at Crest [ft]
Upper Reservoir	Whale Rock Reservoir	1,804	185	1,760

Table 2. Hydro Power Penstock Dimensions: Graves - Whale Rock

-Graves - Whale Rock					
Diameter (ft) Length (mi)					
Headrace Tunnel	20	0.68			
Vertical Shaft	18	0.16			
Horizontal Tunnel	18	4.76			
Penstocks	11	0.07			
Tailrace Tunnel	21	0.99			

Aside from the construction of the new embankment for the new upper reservoir, a hydro power penstock or pressurized tunnel will be required to connect the reservoir to the powerhouse. The pumped storage powerhouse, generating/pumping units, electrical switchyards, interconnecting transmission lines, and other appurtenant facilities would complete the project.

For the electrical interconnection of the Whale Rock PSHP Powerhouse, two alternatives are being proposed and described in Exhibit 1 Section 3 "Transmission Lines". New transmission lines would be needed, and it is expected to make use of

Pacific Gas & Electric's (PG&E) existing right-of-way, as well as upgrades to existing transmission lines and substations.

2. RESERVOIRS.

The upper and lower reservoirs configuration is to be best suited to maximize the available hydraulic head, as well as minimize the penstock layout within environmental constraints. The proposed reservoir sites within this application are the result of conceptual engineering completed by Premium Energy and its consultants. During the term of the preliminary permit, PEH will further investigate on the new reservoirs configuration and select the best suited location for energy, economic and environmental considerations.

The project concept includes one lower reservoir alternative (existing Whale Rock) and one upper reservoir in the northern area of San Luis Obispo County. A hydraulic head of 1,558 ft would exist between the new upper and the lower reservoir, which would be exploited for hydro power generation.

Although percolation losses could otherwise represent a major setback on the development of the project, PEH is considering the implementation of geomembranes on the base of the proposed reservoir to reduce these losses (See Figure 2). Soil conditions would need to be further studied to determine the permeability of the soil.

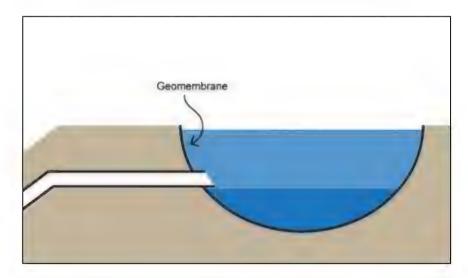


Figure 2. Conceptual diagram: Geomembrane implementation (not to scale).

A. Lower Reservoir Configuration

The project proposes the use of Whale Rock as a lower reservoir, a man-made reservoir completed in 1961. The majority of the 13,000-acre watershed is designated as grazing land. The remaining land uses are agricultural crops, rural land, and open space/recreational. The area is sparsely populated and minimally developed. Restrictions on public access are maintained on the State land surrounding the Whale Rock Reservoir. A narrow portion of the east shoreline allows controlled fishing.

Boating and physical contact by human bodies is not permitted anywhere on the reservoir, except by City of San Luis Obispo reservoir staff. ¹

The land surrounding the Whale Rock Reservoir is owned by the State of California and operated by the City of San Luis Obispo under the direction of the Whale Rock Commission.

The Project will operate in a closed loop system. Therefore, operation will reuse the water in a cyclic manner and no more significant amount of water will be diverted from Whale Rock Reservoir once the upper reservoir filling is completed. The project's proposed reservoirs will provide enough water storage capacity for the minimum capacity of 600 MW continuous output for a minimum of 8 hours.

The project is scalable and depending on the market demands for larger capacity and extended hours storage, could be uprated up to 1500MW or larger, with storage duration of up to 48 hours to support grid power restoration after a major grid black out.

B. Upper Reservoir Configuration

The project alternative involves a new upper reservoir created in private owned. It is located seven miles northeast from Cayucos, San Luis Obispo County. Physical characteristics are detailed in Table 3.

Proposed Upper Reservoir	Surface Area [acre]	Storage Capacity [acre-ft]	Maximum Surface Elevation [ft]
Graves Reservoir	87	4,780	1,788

Table 3. Upper Reservoir Alternatives Characteristics

Any of the proposed upper reservoir alternatives would have enough storage capacity for 600 MW of power generation for up to 8 hours.

Again the project is scalable, and the upper reservoir could be enlarged or connected to other upper reservoirs to increase the capacity rating of the PSH to 1500MW or more, and with storage duration of up to 48 hours.

To enable pumped storage operation, the new reservoir will have intake-outlet structures with a submerged intake elevation at an adequate height. Below this elevation, a permanent reserve of water will remain in the reservoirs. From the intake-outlet

¹ County of San Luis Obispo, Department of Public Works, 2021. *County of San Luis Obispo Whale Rock Reservoir County Service Area 10 - Cayucos Watershed Sanitary Survey Five Year Update (2016-2020)*. [online] pp.3,5. Available at: [Accessed 29 March 2022].

structures, a hydro power penstock or pressure tunnel will unfold to connect to the new Whale Rock PSH Powerhouse and then to Whale Rock Reservoir

Additional tunnels may be constructed depending on the final rating of the project.

In the event water would need to be released from Graves upper reservoir, it would discharge through the spillways and then through natural creeks. Definitive runoff paths and improvements, if needed, will be developed during the Preliminary Permit's term.

3. TRANSMISSION LINES.

A new Whale Rock PSH Substation would be installed in the southern of Whale Rock reservoir close to the new Powerhouse, which could be located above-ground. The alternatives to interconnect the Proposed Substation to the regional electrical utility network are described below.

- 1. **Transmission Alternative 1.** The selected Point of Interconnection (POI) for this alternative would be a new tap in the Morro Solar 230 kV transmission line. This require upgrading 7 miles of an existing transmission line from Cayucos Baywood PG&E to 230kV. No new right-of-way is necessary.
- 2. **Transmission Alternative 2.** The selected POI for this alternative would be a new tap in the Morro Diablo 230 kV transmission line. This require upgrading 7 miles of an existing PG&E transmission line from Cayucos Baywood to 230kV. Around 0.5 miles of a new right-of-way would be constructed in the South of Baywood substation for the new tap interconnection.

Whale Rock PSH would be able to store renewable energy, mainly offshore wind, and provide load balancing, as well as deliver energy to either PG&E or SCPPA members when needed. Further studies of the project's transmission path, voltage level, number of circuits, and interconnection alternatives will be carried out during the term of this preliminary permit, to select the best alternative.

4. PROJECT CAPACITY.

The project is proposed to store renewable energy, mainly wind from the upcoming offshore projects in the Morro Bay and Diablo Canyon Call Areas, and facilitate the goal of supplying firm, low-priced, clean power to the grid during extended hours of storage operation (up to 48 hours).

Based on preliminary analysis, the initial planned total installed capacity of the Whale Rock PSH would be 600 MW. Considering the capacity factor, energy availability, roundtrip efficiency, and rated capacity, the estimated annual generation of the Project would be about 1,200 GWh. Although the project capacity has been set to 600 MW/8 hours, the project's capacity and storage duration may vary as studies progress. Premium Energy also plans to conduct a system impact study and power market investigations to

help further refine the progressive stages of development of suitable energy storage uprating.

The gross head has been estimated to be around 1,588 feet. At the present time, the project concept envisions procurement of four new pump-turbine generator-motor sets for the initial 600MW pumped storage powerhouse, with units rated at 150 MW each.

5. FEDERAL LANDS.

At the time this permit is submitted, the project does make use of Federal Lands. The proposed penstock may use "Bureau of land Management" and "USDA Forest Service" lands.

The interconnection of the project would use existing transmission lines interconnecting the proposed Whale Rock Powerhouse, to PG&E system. The existing transmission corridor extends through private lands.

6. ADDITIONAL INFORMATION.

In the development of this application, Premium Energy has acknowledged the following issues pertaining to the project:

Wilderness, Conservation, and Roadless Areas: Premium Energy understands the importance of preserving the Wilderness designated areas under the Wilderness Act of 1964. Thus, PEH has reviewed information from the USDA Forest Service, Bureau of Land Management (BLM), and California Department of Fish and Wildlife (CDFW) to ensure the proposed reservoirs and facilities do not affect any Wilderness, Conservation, and Roadless areas.

<u>Recreational Areas:</u> Whare Rock Reservoir has restrictions on public access, maintained on the State land. A narrow portion of the east shoreline allows controlled fishing. Boating and physical contact by human bodies is not permitted anywhere on the reservoir, except by City of San Luis Obispo reservoir staff.

<u>Fault Zones</u>: Both lower and upper reservoir are located close to the Oceanic Fault Zone. The lower reservoir Whale Rock is approximately 2 miles away, and the proposed Graves upper reservoir is around 3 miles away. This information has been obtained from the U.S. Geological Service (USGS).

Earthquake resistance will be a foremost requirement in the design of the proposed dam in this application. The upper reservoir dam will have an appropriate structural and geotechnical design to withstand the corresponding peak ground acceleration of the site during seismic events (50-60% of gravity acceleration). Premium Energy commits to ensuring the proposed dam have a high seismic reliability to ensure safety of the nearby population and infrastructure.

<u>Tribes and Tribal Lands:</u> Premium Energy has identified the Indian tribes that may be affected by the project (see page 4 of this application) and has also used U.S. Census Bureau² information to identify Tribal Lands that could be affected by the project. At the moment of filing this application, neither a Tribe, nor Tribal lands, are directly affected by the proposed Whale Rock PSHP. However, this could change after further investigation during the Preliminary Permit phase.

Some other opportunities have also been identified by PEH during the development of this application, including, but not limited to:

<u>Market Operation</u>: Premium Energy envisions the Project to provide firming and shaping services by pairing with PSH long-hours and large capacity energy storage, keeping the grid stable in the face of potential wind intermittency, smoothing out the over- and under-generation, also integrating ancillary resources and services.

<u>Battery Energy Storage (BESS)</u>: Inverter-based energy storage such as li-ion battery systems can complement the proposed pumped storage project. The Twitchell PSH would have the ability to withstand large inrush currents and provide inertia to the grid when a disturbance occurs, or during a grid re-energization, while the BESS could provide fast response required to sudden and rapid variations in the system.

Premium Energy commits to working with all agencies and intervenors to address any project related issues and concerns.

No further definitive information regarding this project is available at the time of filling this application.

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² https://catalog.data.gov/dataset/tiger-line-shapefile-2017-nation-u-s-current-american-indian-alaska-native-native-hawaiian-area

Form FERC-587 OMB No. 1902-0145 (Expires 10/31/2021)

LAND DESCRIPTION

Public Land States (Rectangular Survey System Lands)

1. STATE CALIFORNIA		2. FER	2. FERC PROJECT NO. Not applicable		
B. TOWNSHIP _	28S	RANG	E10E	MERIDIAI	N_Mount Diablo
4. Chec	ck one:			Check one:	
	_icense Preliminary Perm	nit		Pending	
preliminary pe	rmit is issued, giv	ve expiration date	: Not a	Not applicable	
	5. I	EXHIBIT SHEET	NUMBERS OR	LETTERS	
Section 6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27 Exhibit 3	26 Exhibit 3	25
31	32	33	34 Exhibit 3	35 Exhibit 3	36 Exhibit 3

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Form FERC-587 OMB No. 1902-0145 (Expires 10/31/2021)

LAND DESCRIPTION

Public Land States (Rectangular Survey System Lands)

1. STATE	STATECALIFORNIA		2. FER	2. FERC PROJECT NO. Not applicable	
3. TOWNSHIP _	28S	RANG	E11E	MERIDIAN	Mount Diablo
4. Chec	k one:			Check one:	
	icense Preliminary Perm	nit		Pending Issued	
If preliminary per					_
Section 6		EXHIBIT SHEET		LETTERS 2	1
Section 6	5	4	3	2	'
7	8	9	10	11	12
18	17	16	15 Exhibit 3	14	13
19	20	21	22 Exhibit 3	Exhibit 3	24
30 Exhibit 3	29 Exhibit 3	28 Exhibit 3	27	26	25
31 Exhibit 3	32	33	34	35	36
	me <u>Victor</u> o. (909-595-5	-			

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Form FERC-587 OMB No. 1902-0145 (Expires 10/31/2021)

LAND DESCRIPTION

Public Land States (Rectangular Survey System Lands)

1. STATE	CALIFORNIA		2. FER	2. FERC PROJECT NO. Not applicable	
3. TOWNSHIP _	298	RANGE	≣ <u>10E</u>	MERIDIAN	Mount Diablo
4. Chec	k one:			Check one:	
	icense Preliminary Perm	nit		Pending Issued	
If preliminary per		ve expiration date			_
Section 6	5	EXHIBIT SHEET 4	NOMBERS OR	2	1
	Exhibit 3				
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31	32	33	34	35	36
6. Contact's na	me Victor	r M. Rojas			
Telephone n	o. <u>(909-595-</u> 5	5314)			
Date submit	ted <u>March</u>	n 31, 2022			

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

EXHIBIT 2 – DESCRIPTION OF THE PROPOSED STUDIES

1. GENERAL REQUIREMENT.

During the 48-month term of this Preliminary Permit, Premium Energy will conduct studies to evaluate the proposed Whale Rock PSH. The studies will be conducted both on-office and field research to improve the preliminary plant characteristics as presented in this application, which includes plant capacity, energy generation and consumption, facilities layouts, environmental and institutional constraints, costs, and schedules.

• Technical feasibility studies:

This proposed study will include a) Project site land investigation, b) Evaluation of proposed upper and lower reservoir alternatives, c) Engineering studies to optimize the project's physical configuration, and d) Determination of size and specifications of the required electromechanical equipment.

• Geotechnical studies:

This proposed study will address a) Geological and seismic conditions, and b) Soil surveys, test pits, bore holes, and topographical surveying.

• Water and groundwater quality studies:

This prosed study will evaluate hydrological conditions in the area (runoff water, rain, evaporation, percolation, and groundwater flow).

• Water rights study:

This study will analyze the project's water supply plan, including legal and water rights matters.

• Environmental and cultural impact studies:

This study will comprise environmental surveys, impact identification, and evaluate mitigation strategies.

• Energy production and energy needs studies:

This proposed study will a) Evaluate the energy market, b) Determine preliminary power sales and supply expectations, c) Evaluate transmission interconnection alternatives, and d) Analyze the electrical system impact.

• Economic feasibility study:

This proposed study will prepare a) Cost Estimates, b) Economic feasibility, and c) Financing options research.

Consultation with appropriate state, federal, and local resource agencies, private and non-governmental organizations will take place. Also, throughout the term of the preliminary permit, Premium Energy will conduct an Open House and multiple outreach meetings with the different stakeholders to address comments, concerns and inquiries. This would ensure a successful development of the project.

Based on the results and findings of the initial stages of the feasibility study, the applicant will prepare a Notice of Intent and Pre-Application Document as detailed in 18 C.F.R. §§5.5 and 5.6.

Temporary access roads will not be required to reach the project's site and perform the required studies. The existing Presilla Road will be used to access the upper reservoir facilities. For the existing Whale Rock Reservoir, the Old Creek Road is enough to reach the project's site.

Lastly, as transmission alternative 1 use existing ROW new roads will not be required. The alternative 2 require the construction of small section for the new half-a-mile ROW.

2. WORK PLAN FOR NEW DAMS CONSTRUCTION.

The new dams' construction will require subsurface investigations in TCR, Gorman Post and National Cement lands. The investigations would be done at the proposed reservoirs site, as depicted in Exhibit 3. Soil and rock borings will be necessary to determine the rock/soil structure and stability for the proposed dams and powerhouse foundations. Soil and rock samples shall be extracted to conduct studies and determine the soil mechanical properties. Therefore, assessing the project site's suitability for construction of the new dams. Furthermore, seismic surveys will also be required.

The schedule of activities will be completed by the applicant during the permit period as shown in the table below:

Table 4. Schedule of Activities

Activity	Start Month	End Month
Consultation with appropriate state, federal, and local agencies, private and non-governmental organizations	0	42
Technical feasibility studies	0	42
Environmental and cultural impact studies	6	42
Geotechnical studies	12	38
Water and groundwater quality studies	18	38
Water rights study	18	38
Energy production and need studies	38	42
Economic feasibility study	38	42
Organize PAD / NOI	42	48
Submit PAD / NOI application	48	48

The schedule of activities may deviate from its initial formulation. Activities may be adjusted or supplemented depending upon circumstances which may develop as the studies proceed. Remedial actions to the possible disturbance of the proposed studies include the implementation of an erosion and material disposal plan, backfilling of core borings and test pits, and replanting any disturbed vegetation.

3. STATEMENT OF COSTS AND FINANCING.

The total estimated cost of carrying out or preparing the studies, investigations, tests, surveys, maps, plans, or specifications described above are about \$5 Million dollars.

The expected sources of financing available to carry out the activities of the described feasibility study are:

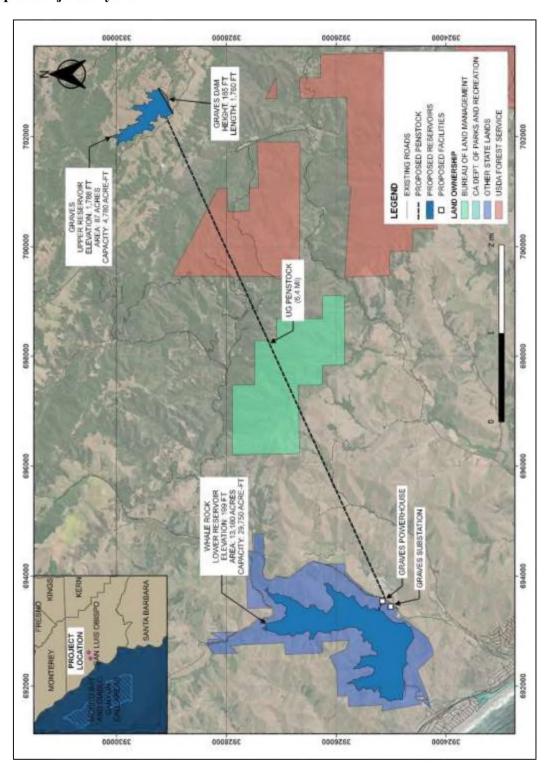
- o Premium Energy's available funds
- **Equity Investors**

The proposed market for the energy storage and production covers the electric markets in California. Power purchasing entities and other potential off takers will be identified in further investigations during the term of the preliminary permit.

EXHIBIT 3 – WHALE ROCK PUMPED STORAGE HYDRO PROJECT MAPS

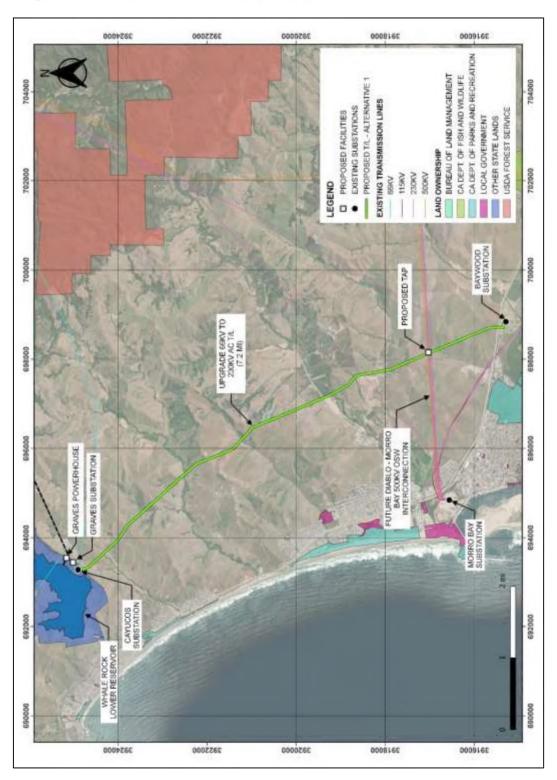
1. PROPOSED PROJECT STUDY AREA BOUNDARY.

Map 1. Project Layout

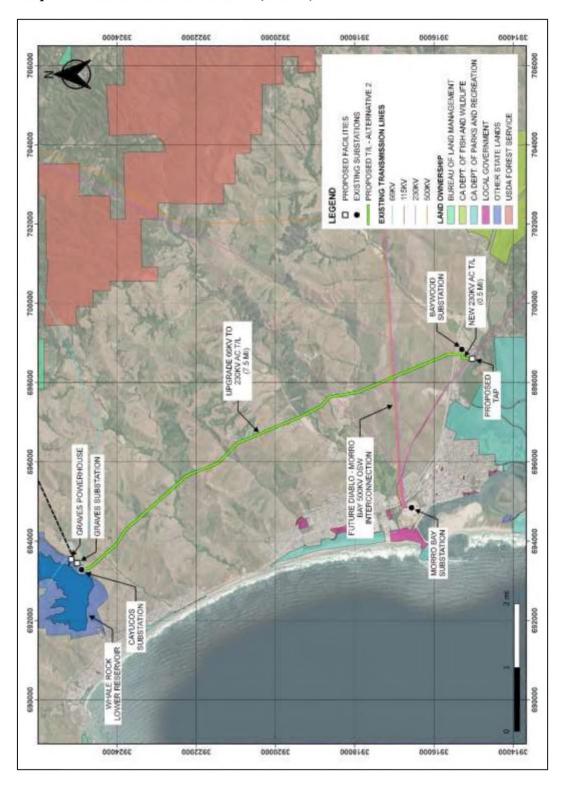


2. PROPOSED ALTERNATIVES FOR ELECTRICAL INTERCONNECTION.

Map 2. Transmission Alternative 1 (PG&E)



Map 3. Transmission Alternative 2 (PG&E)



Document Accessio	on #: 20220331-5534	Filed Date: 03/31/202	2
Document Cor	ntent(s)		
Premium Ene	rgy Preliminary Per	mit App Whale Rock	PSP.pdf1